

WHAT IS CLAIMED IS:

- 1 1. A method comprising:
2 transmitting a first set of data on a first data channel to a first device;
3 transmitting, concurrently with transmitting the first set of data, a second set of data on a
4 second data channel to a second device, wherein the second data channel is different
5 from the first data channel;
6 receiving a third set of data on the second data channel, wherein the third set of data is sent
7 by the first device; and
8 receiving a fourth set of data on the second data channel, wherein the fourth set of data is
9 sent by the second device.
- 10 2. The method as in Claim 1, wherein the third set of data includes an acknowledgement of the
11 reception of the first set of data by the first device and the fourth set of data includes an
12 acknowledgement of the reception of the second set of data by the second device.
- 13 3. The method as in Claim 1, wherein the first data channel and the second data channel include
14 separate bands of frequencies.
- 15 4. The method as in Claim 1, wherein the second device is associated with a communication
16 standard.
- 17 5. The method as in Claim 4, wherein the communication standard includes an IEEE 802.11
18 communication standard.
- 19 6. The method as in Claim 1, wherein the first set of data is transmitted at a higher data rate
20 than the second set of data.

- 1 7. The method as in Claim 1, wherein the first set of data includes a greater amount of data than
2 the second set of data.
- 1 8. The method as in Claim 1, further including the step of controlling a time to transmit the first
2 set of data to the first device.
- 1 9. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data includes padding the first set of data with null data to allow a packet length associated
3 with the first set of data to be congruent with a packet length associated with the second data
4 set.
- 1 10. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data includes providing a field value with the first set of data, wherein the field value
3 indicates a time period before the first device may send an acknowledgment.
- 1 11. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data includes adjusting a number of bits sent per unit time associated with the first set of data
3 to allow a packet length associated with the first set of data to be congruent with a packet
4 length associated with the second data set.
- 1 12. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data includes adjusting a number of bits sent per unit time associated with the first set of data
3 to allow a packet length associated with the first set of data to be non-congruent with the
4 packet length associated with the second set of data.

- 1 13. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data includes adjusting a number of bytes assigned to the first set of data by a medium access
3 control layer to allow a packet length associated with the first set of data to match a packet
4 length associated with the second set of data.
- 1 14. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data is performed to control a transmission of an acknowledgement associated with the first
3 set of data.
- 1 15. The method as in Claim 8, wherein the step of controlling the time to transmit the first set of
2 data includes aligning symbol boundaries in the first set of data to symbol boundaries in the
3 second set of data to reduce interference between the first data channel and the second data
4 channel.

- 1 16. A method comprising:
2 determining a first transmission power for transmitting data to a first device to reduce a time
3 required to transmit data to the first device, wherein the time required to transmit data
4 to the first device is dependent on a time to transmit data to a second device;
5 determining a second transmission power for transmitting data to the second device, wherein
6 the second device is different from the first device;
7 configuring a first data channel to transmit data to the first device based on the first
8 transmission power; and
9 configuring a second data channel to transmit data to the second device based on the second
10 transmission power.
- 11 17. The method as in Claim 16, wherein the step of determining the first transmission power
12 further dependent on time required to transmit data to the second device.
- 13 18. The method as in Claim 16, wherein the second data channel is further used to receive data
14 from the first device and the second device.
- 15 19. The method as in Claim 16, wherein the steps of determining the first and the second
16 transmission powers are based on an amount of data to be transmitted.
- 17 20. The method as in Claim 16, wherein the steps of determining the first and the second
18 transmission powers are based on a signal quality.
- 19 21. The method as in Claim 20, wherein the signal quality is based on a signal to noise ratio.
- 20 22. The method as in claim 20, wherein the signal quality is based on a bit error rate.

- 1 23. The method as in Claim 20, wherein the signal quality is based on a channel capacity.
- 1 24. The method as in Claim 16, wherein configuring the first data channel includes setting a first
2 data rate for communicating with the first device.
- 1 25. The method as in Claim 16, wherein configuring the second data channel includes setting a
2 second data rate for communicating with the first device.
26. The method as in Claim 16, wherein the second device is associated with a first set of
specifications associated with a communication standard.
27. The method as in Claim 26, wherein the first device is associated with a second set of
specifications, different from the first set of specifications.
28. The method as in Claim 26, wherein the communications standard includes IEEE 802.11.

- 1 29. A system comprising:
2 a source device to communicate with a first device and a second device, the source device
3 including:
4 a transmitting portion to:
5 transmit a first set of data to the first device using a first data channel;
6 transmit a second set of data, concurrent with the first set of data, to the
7 second device using a second data channel, and
8 a receiver portion to receive data from the first device and the second device over the
9 second data channel.
- 1 30. The system as in Claim 29, wherein the second device is associated with a first set of
2 specifications of a communication standard;
- 1 31. The system as in Claim 30, wherein the first device is associated with a second set of
2 specifications, different from the first set of specifications.
- 1 32. The system as in Claim 29, wherein the transmitting portion includes a first transmitter to
2 transmit using the first data channel and a second transmitter to transmit using the second
3 data channel.
- 1 33. The system as in Claim 29, wherein the transmitting portion is further used to identify a first
2 transmission power to associate with the first device and a second transmission power to
3 associate with the second device.

1 34. The system as in Claim 33, wherein the first transmission power is determined based on
2 properties associated with the first device.

1 35. The system as in Claim 34, wherein the properties include a data reliability received by the
2 first device,

1 36. The system as in Claim 34, wherein properties include an amount of data to be transmitted to
2 the first device.

1 37. A method comprising:
2 transmitting a first set of data to a first device;
3 transmitting a second set of data to a second device, different from the first device, wherein
4 properties associated with the second set of data are manipulated to control an
5 acknowledgement of a receipt of the second set of data, wherein the properties are
6 based on the first set of data.

1 38. The method as in Claim 37, wherein the properties include an amount of data associated with
2 the second set of data.

3 39. The method as in Claim 38, wherein the second set of data is padded with null data to force
4 an amount of data associated with the second set of data to be congruent with an amount of
5 data associated with the first set of data.

6 40. The method as in Claim 37, wherein the properties associated with the second set of data
1 include property values embedded with the second set of data.

2 41. The method as in Claim 40, wherein the property values include a field value related to an
3 amount of data associated with the first set of data.

4 42. The method as in Claim 41, wherein the field value includes a delay value to specify a period
5 of time in which the second device waits before submitting the acknowledgement.

6 43. The method as in Claim 41, wherein the field value includes a virtual length to be associated
1 with the second set of data to allow the second device to respond to a data size congruent
2 with the first set of data received by the first device.
3

- 1 44. The method as in Claim 37, wherein the property is associated with a number of bits to be
2 transmitted per unit time to the second device to allow the second device to receive the
3 second set of data in a time congruent to the amount of time used by the first device to
4 receive the first set of data.
- 1 45. The method as in Claim 37, wherein the first set of data and the second set of data represent
2 the same set of data.

- 1 46. A method comprising:
 2 transmitting a first set of data to a first receiving device;
 3 transmitting a second set of data to a second receiving device, different from the first device,
 4 wherein properties associated with the second set of data are altered to allow a
 5 relation between the second set of data and the first set of data to reduce adjacent
 6 channel interference at the first receiving device and the second receiving device.
- 1 47. The method as in Claim 46, wherein the relation includes an alignment of symbol boundaries
 2 associated with the first set of data to symbol boundaries associated with the second set of
 3 data at a transmitting device.
48. The method as in Claim 46, wherein the relation includes an alignment of symbol boundaries
 2 associated with the first set of data to symbol boundaries associated with the second set of
 3 data at the first receiving device and the second receiving device.
49. The method as in Claim 46, wherein the first set of data and the second set of data represent
 2 the same set of data.

- 1 50. A method comprising:
 2 determining a first transmission power for transmitting data to a first device to reduce a
 3 power required to transmit data to the first device,
 4 determining a second transmission power for transmitting data to the second device, wherein
 5 the second device is different from the first device;
 6 configuring a first data channel to transmit data to the first device based on the first
 7 transmission power;
 8 configuring a second data channel to transmit data to the second device based on the second
 9 transmission power; and
 10 configuring the second data channel to further receive data associated with the first device
 11 and the second device.
- 11 51. The method as in Claim 50, wherein the data associated with the first device and the second
 12 device includes acknowledgements associated with data sent to the first device and the
 13 second device.
- 14 52. The method as in Claim 50, wherein the step of determining the first transmission power
 15 further dependent on time required to transmit data to the second device.
- 16 53. The method as in Claim 50, wherein the steps of determining the first and the second
 17 transmission powers are based on an amount of data to be transmitted.
- 18 54. The method as in Claim 50, wherein the steps of determining the first and the second
 19 transmission powers are based on a signal quality.